TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

Physical Requirements for Coarse Aggregate for Bituminous Concrete

	IS: 2386 Part-I, III & IV	Date: 01-11-2019
Lab I'd	ISO/IEC17025:2005	
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.	
Consultant	Transheight Consultants Private Limited	
Contractor	B.B Umesh (S.M.L.P Asphats)	
Customer Reference	BBMP/EE/BTP/WO/110/2019-20	
Source of Sample	Sample supplied by Agency	
Sample Condition	Satisfactory	
Date of Reciept	01-11-2019	
Sample Type	Bituminous Concrete (BC)	
Date of Test	01-11-2019	

Table 500-16 : Physical Requirements of Coarse Aggregate for Bituminous Concrete (BC)

Peperty	Test	Result	Specification	Method of Test
Partial Shape	Flakiness Index	15.85	Combination Flakiness & Elongation Index for BC is Maximum 35%	IS: 2386 Part-I
	Elongation Index	13.60		
Strength	Aggregate Impact Value	22.5	Maximum 24%	IS: 2386 Part-IV
Specific Gravity	Specific Gravity	2.56	Maximum 2.7	IS: 2386 Part-III
Water Absorption	Water Absorption	1.20%	Maximum 2%	IS: 2386 Part-III

Remarks :

Transheight Consultants Pvt. Ltd. Bangalore

PMC Client Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11	

Test Reults of Gradation for Bituminous Concrete (BC)

IS 2386 (Part-1) 1963 (Reaffirmed-2007)	Date: 01-11-2019

Lab I'd	ISO/IEC17025:2005
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	01-11-2019
Type of Mix	Bituminous Concrete (BC)
Date of Test	01-11-2019

Total wt of the sample (gms):			5000			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-17) (Grading-II)	Remarks
19	0	0	0.0	100	100	Satisfactory
13.2	177	177	3.5	96.5	90-100	Satisfactory
9.5	665	842	16.8	83.2	70-88	Satisfactory
4.75	1125	1967	39.3	60.7	53-71	Satisfactory
2.36	489	2456	49.1	50.9	42-56	Satisfactory
1.18	330	2786	55.7	44.3	34-48	Satisfactory
0.6	235	3021	60.4	39.6	26-38	Satisfactory
0.3	462	3483	69.7	30.3	18-28	Satisfactory
0.15	445	3928	78.6	21.4	12-20	Satisfactory
0.075	442	4370	87.4	12.6	4-10	Satisfactory
PAN	630	5000	100.0	0.0	0	Satisfactory

Remarks: Satisfactory

Transheight Consultants Pvt. Ltd. Bangalore EMC

Client Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

Test Report on Bitumen

	IS: 1201-1220 (1978) (Reaffirmed-2004)	Date: 01-11-2019
Lab I'd	ISO/IEC17025:2005	
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.	
Consultant	Transheight Consultants Private Limited	
Contractor	B.B Umesh (S.M.L.P Asphats)	
Customer Reference	BBMP/EE/BTP/WO/110/2019-20	
Source of Sample	Sample supplied by Agency	
Date of Reciept	01-11-2019	
Sample Type	Bitumen (VG-30)	
Date of Test	01-11-2019	

Test Results

Sl. No	Name of Test	Result	Requirements as per IS: 73-2013
1	Penetration at 25°C, 1/10th mm	65	60 to 70
2	Softening Point, °C	52	Min. 47°C
3	Ductility, cm	55	Min. 40cm
4	Viscocity Test,Poise(Min)	2750	Range 2400-3600
5	Flash Point,°C	235	Min. 220°C

Remarks :

Transheight Consultants Pvt. Ltd. Bangalore PMC

Client Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

Test Result on Stability of Mix

IS: 1201 &1220 (1978) (Reaffirmed-2004)	Date: 02-11-2019
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Date of Reciept	02-11-2019
Sample Type	Bitumen
Date of Test	02-11-2019

Test Results of the test conducted on the Bituminos Concrete (BC) mix sample are as follow

Sl. No	Name of Test	Test-1	Test-2	Specified limit as per MORTH specification table 500-11
1	Marshall Stability at 60°C	15.36	15.99	10 KN (Minimum)
2	Marshal flow at 60°C	2.9	3.1	2-4
3	Percentage air Voids	4.35	5.03	3-6
4	Percent Voids in mineral Aggregate (VMA %)	14.28	14.26	13-15
5	Percent Voids in mineral Bitumen (VFB %)	71.35	73.64	65-75
5	Density, g/cc	2.46	2.50	-

Remarks :

Transheight Consultants Bangalore

PMC Client Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

Test Reults of Gradation

Date: 26-10-2019

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Date of Reciept	25-10-2019
Sample Type	Gradation of GSB, Grade-Vsample
Date of Test	26-10-2019

Weight of sample (gms):		5000				
Sl. No.	Sieve Size, as per MORT&H	Weight Retained (gms)	% weight Retained	Cumulative % weight Retained	% Passing	Standard Gradation as per MORT&H 5th Revision
1	75.0 mm	0	0	0	100	100
2	53.0mm	506.5	506.5	10.13	89.87	80-100
3	26.50 mm	899	1405.5	28.11	71.89	55-90
4	9.50 mm	1102	2507.5	50.15	49.85	35-65
5	4.75 mm	635	3142.5	62.85	37.15	25-50
6	2.36 mm	1108.5	4251	85.02	14.98	10--20
7	0.85mm	471	4722	94.44	5.56	2--10
8	0.425 mm	144	4866	97.32	2.68	0-5

Remarks :

Transheight Consultants Pvt. Ltd. Bangalore

PMC Client Contractor

AEE (VRP) SD

www.transheight.com
transheight.consultant@gmail.com

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

Determination of Flakiness Index and Elongation Index of Coarse Aggregate

IS 2386 (Part-1) 1963 (Reaffirmed-2007)	Date: 26-10-2019
Lab I'd	ISO/IEC17025:2005
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	25-10-2019
Type of Mix	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	26-10-2019

Results

Sl. No	Index	Percentage of Flakiness and Elongation Index	Specified limits as per MORTH (specification table 400-12)
1	Flakines Index (%)	30.12	Combined Flakiness and Elongation Index for WMM is Maximum 35%
2	Elongation Index (%)	27.25	
3	Water Absorption (%)	0.85	Max 2%
4	Aggregate Impact Value (%)	13.66	Aggregate Impact Value for WMM is Maximum 35%
5	Dry Desnsity (MDD) gm/cc	2.29	-
6	Moisture in (OMC) %	5.59	

Remarks :

Transheight Consultants Pvt. Ltd. Bangalore

PMC | Client | Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

Test Reults of Gradation for Wet Mix Macadam (WMM)

IS: 2386 Part I	Date: 26-10-2019

Lab I'd	ISO/IEC17025:2005
Client	Bruhat Bengalore Mahanagara Palike , Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Date of Reciept	25-10-2019
Type of Mix	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	26-10-2019

Total wt of the sample (gms):			11000			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 400-13)	Remarks
53	0	0.0	0.00	100	100	Satisfactory
45	440	440.0	4.00	96.0	95-100	Satisfactory
22.4	3740	4180.0	38.00	62.0	60-80	Satisfactory
11.2	2136	6316.2	57.42	42.6	40-60	Satisfactory
4.75	1780	8096.0	73.60	26.4	25-40	Satisfactory
0.36	1133	9229.0	83.90	16.1	15-30	Satisfactory
0.6	836	10065.0	91.50	8.5	8-22	Satisfactory
0.075	869	10934.0	99.40	0.6	0-5	Satisfactory

Remarks: Satisfactory

Transheight Consultants Pvt. Ltd. Bangalore

PMC | Client | Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

FIELD DENSITY BY SAND REPLACEMENT METHOD

IS 2720 (Part-28)	Date: 29-10-2019

Lab I'd	ISO/IEC17025:2005
Client	Bruhat Bengalore Mahanagara Palike, Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Type of Mix	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	29-10-2019

Description of materials:	Subgrade		
Lab.MDD (gm/cc) =	2.290	Lab.OMC(%) =	5.59
Bulk Density of sand:	1.385	Sand retained in cone (gm)=W1	848.00

FIELD DENSITY BY SAND REPLACEMENT METHOD

SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	5342.50	5344.50
2	Wt of sand + cylinder before pouring(gm) (w3)	15000.00	15000.00
3	Wt of sand+ cylinder after pouring (gm)(w4)	11031.85	11048.31
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	3120.15	3103.69
5	Volume of sand in hole (V = W5/Ysand)	2252.82	2240.93
6	Bulk density (gm/cc) (Yb= W2/v)	2.37	2.38
7	Moisture meter reading (%)	6.05	6.25
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.24	2.24
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	**97.65**	**98.02**
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	97	

Remarks: Satisfactory

Transheight Consultants Pvt. Ltd. Bangalore PMC

Client **Contractor**

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11

FIELD DENSITY BY SAND REPLACEMENT METHOD

IS 2720 (Part-28)	Date: 31-10-2019

Lab I'd	ISO/IEC17025:2005
Client	Bruhat Bengalore Mahanagara Palike, Byatarayanapura, Bengaluru.
Consultant	Transheight Consultants Private Limited
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	BBMP/EE/BTP/WO/110/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Type of Mix	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	31-10-2019

Description of materials:	Subgrade		
Lab.MDD (gm/cc) =	2.290	Lab.OMC(%) =	5.59
Bulk Density of sand:	1.385	Sand retained in cone (gm)=W1	848.00

FIELD DENSITY BY SAND REPLACEMENT METHOD

SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	5351.00	5349.00
2	Wt of sand + cylinder before pouring(gm) (w3)	15000.00	15000.00
3	Wt of sand+ cylinder after pouring (gm)(w4)	11032.78	11061.66
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	3119.22	3090.34
5	Volume of sand in hole (V = W5/Ysand)	2252.14	2231.29
6	Bulk density (gm/cc) (Yb= W2/v)	2.38	2.40
7	Moisture meter reading (%)	5.72	6.02
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.25	2.26
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	**98.14**	**98.74**
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	97	

Remarks: Satisfactory

Transheight Consultants Pvt Ltd. Bangalore PMC

Client **Contractor**

AEE (VRP) SD

www.transheight.com
transheight.consultant@gmail.com

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11			
Test Reults of Bitumen Binder Content and Gradation for Bituminous Concrete (BC)			
IS 2386 (Part-1) 1963 (Reaffirmed-2011)			**Date: 07-11-2019**
Lab I'd	**ISO/IEC17025:2005**		
Client	**Bruhat Bengalore Mahanagara Palike (BBMP) ,Byatarayanapura,Bengaluru.**		
Consultant	**Transheight Consultants Private Limited**		
Contractor	**B.B Umesh (S.M.L.P Asphats)**		
Customer Reference	**BBMP/EE/BTP/WO/110/2019-20**		
Source of Sample	**Sample supplied by Agency**		
Date of Reciept	**7/11/2019**		
Type of Mix	**Bituminous Concrete (BC)**		
Date of Test	**7/11/2019**		
Calculation			
	Chainage:		
	Trial 1	**Trial 2**	**Trial 3**
Wt of empty Bowl (g)	1031	1031	1032
Wt of empty Bowl + Mix before extraction (g)	1531	1531	1532
Wt of empty Bowl + Mix after extraction (g)	1504	1505	1506
Wt of filter paper before extraction (g)	3.5	3.5	3.5
Wt of filter paper after extraction (g)	5.33	5.67	5.39
Wt of fines (g)	1.83	2.17	1.89
Wt of aggrigate (g)	474.83	476.17	475.89
Wt of bitumin (g)	27	26	26
% binder contents in mix	5.69	5.46	5.46
Avg binder contents in mix (%)	**5.54**		
Remarks :			
PMC	**Client**	**Contractor**	

Transheight Consultants Pvt. Ltd. Bangalore

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Test Reults of Bitumen Binder Content and Gradation for Bituminous Concrete (BC)						
					Date: 07-11-2019	
After Extraction (Trial-1)						
Total wt of the sample (gms):			**474.83**			
IS Sieve size (mm)	**Weight retained (gm)**	**Cumulative Weight Retained (gm)**	**Cumulative % of Retained**	**Cumulative % of Passing**	**Specifcations as per MORTH (Table 500-17) (Grading-II)**	**Remarks**
19	0	0	0.0	100	100	Satisfactory
13.2	15	15	3.2	96.8	90-100	Satisfactory
9.5	98	113	23.8	76.2	70-88	Satisfactory
4.75	111	224	47.2	52.8	53-71	Satisfactory
2.36	50	274	57.7	42.3	42-56	Satisfactory
1.18	38	312	65.7	34.3	34-48	Satisfactory
0.6	40	352	74.1	25.9	26-38	Satisfactory
0.3	33	385	81.1	18.9	18-28	Satisfactory
0.15	24	409	86.1	13.9	12-20	Satisfactory
0.075	42	451	95.0	5.0	4-10	Satisfactory
Remarks: Satisfactory						
After Extraction (Trial-2)						
Total wt of the sample (gms):			**476.17**			
IS Sieve size (mm)	**Weight retained (gm)**	**Cumulative Weight Retained (gm)**	**Cumulative % of Retained**	**Cumulative % of Passing**	**Specifcations as per MORTH (Table 500-23) (Grading-II)**	**Remarks**
19	0	0	0.0	100	100	Satisfactory
13.2	9	9	1.9	98.1	90-100	Satisfactory
9.5	95	104	21.9	78.1	70-88	Satisfactory
4.75	111	215	45.3	54.7	53-71	Satisfactory
2.36	56	271	57.1	42.9	42-56	Satisfactory
1.18	36	307	64.7	35.3	34-48	Satisfactory
0.6	44	351	73.9	26.1	26-38	Satisfactory
0.3	39	390	82.1	17.9	18-28	Satisfactory
0.15	24	414	87.2	12.8	12-20	Satisfactory
0.075	41	455	95.8	4.2	4-10	Satisfactory
Remarks: Satisfactory						
After Extraction (Trial-3)						
Total wt of the sample (gms):			**475.89**			
IS Sieve size (mm)	**Weight retained (gm)**	**Cumulative Weight Retained (gm)**	**Cumulative % of Retained**	**Cumulative % of Passing**	**Specifcations as per MORTH (Table 500-23) (Grading-II)**	**Remarks**
19	0	0	0.0	100	100	Satisfactory
13.2	10	10	2.1	97.9	90-100	Satisfactory
9.5	95	105	22.1	77.9	70-88	Satisfactory
4.75	112	217	45.7	54.3	53-71	Satisfactory
2.36	47	264	55.6	44.4	42-56	Satisfactory
1.18	42	306	64.4	35.6	34-48	Satisfactory
0.6	42	348	73.3	26.7	26-38	Satisfactory
0.3	36	384	80.9	19.1	18-28	Satisfactory
0.15	27	411	86.6	13.4	12-20	Satisfactory
0.075	38	449	94.6	5.4	4-10	Satisfactory
Remarks: Satisfactory						

Transheight Consultants Pvt. Ltd. Bangalore

PMC **Client** **Contractor**

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11			
Test Reults of Bitumen Binder Content and Gradation for Bituminous Concrete (BC)			
IS 2386 (Part-1) 1963 (Reaffirmed-2011)		**Date: 07-11-2019**	
Lab I'd	**ISO/IEC17025:2005**		
Client	**Bruhat Bengalore Mahanagara Palike (BBMP) ,Byatarayanapura,Bengaluru.**		
Consultant	**Transheight Consultants Private Limited**		
Contractor	**B.B Umesh (S.M.L.P Asphats)**		
Customer Reference	**BBMP/EE/BTP/WO/110/2019-20**		
Source of Sample	**Sample supplied by Agency**		
Date of Reciept	**7/11/2019**		
Type of Mix	**Bituminous Concrete (BC)**		
Date of Test	**7/11/2019**		
Calculation			
	Chainage:		
	Trial 1	**Trial 2**	**Trial 3**
Wt of empty Bowl (g)	1030	1032	1032
Wt of empty Bowl + Mix before extraction (g)	1530	1532	1532
Wt of empty Bowl + Mix after extraction (g)	1504	1505	1506
Wt of filter paper before extraction (g)	3.5	3.5	3.5
Wt of filter paper after extraction (g)	5.33	5.67	5.39
Wt of fines (g)	1.83	2.17	1.89
Wt of aggrigate (g)	475.83	475.17	475.89
Wt of bitumin (g)	26	27	26
% binder contents in mix	5.46	5.68	5.46
Avg binder contents in mix (%)	**5.54**		
Remarks :			

Transheight Consultants Pvt. Ltd. Bangalore PMC

Client **Contractor**

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Test Reults of Bitumen Binder Content and Gradation for Bituminous Concrete (BC)						
					Date: 07-11-2019	
After Extraction (Trial-1)						
Total wt of the sample (gms):			475.83			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-17) (Grading-II)	Remarks
19	0	0	0.0	100	100	Satisfactory
13.2	15	15	3.2	96.8	90-100	Satisfactory
9.5	98	113	23.7	76.3	70-88	Satisfactory
4.75	115	228	47.9	52.1	53-71	Satisfactory
2.36	50	278	58.4	41.6	42-56	Satisfactory
1.18	38	316	66.4	33.6	34-48	Satisfactory
0.6	40	356	74.8	25.2	26-38	Satisfactory
0.3	34	390	82.0	18.0	18-28	Satisfactory
0.15	24	414	87.0	13.0	12-20	Satisfactory
0.075	42	456	95.8	4.2	4-10	Satisfactory
Remarks: Satisfactory						
After Extraction (Trial-2)						
Total wt of the sample (gms):			475.17			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-23) (Grading-II)	Remarks
19	0	0	0.0	100	100	Satisfactory
13.2	9	9	1.9	98.1	90-100	Satisfactory
9.5	95	104	21.9	78.1	70-88	Satisfactory
4.75	111	215	45.2	54.8	53-71	Satisfactory
2.36	56	271	57.0	43.0	42-56	Satisfactory
1.18	36	307	64.5	35.5	34-48	Satisfactory
0.6	44	351	73.8	26.2	26-38	Satisfactory
0.3	39	390	82.0	18.0	18-28	Satisfactory
0.15	24	414	87.0	13.0	12-20	Satisfactory
0.075	41	455	95.6	4.4	4-10	Satisfactory
Remarks: Satisfactory						
After Extraction (Trial-3)						
Total wt of the sample (gms):			475.89			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-23) (Grading-II)	Remarks
19	0	0	0.0	100	100	Satisfactory
13.2	10	10	2.1	97.9	90-100	Satisfactory
9.5	95	105	22.1	77.9	70-88	Satisfactory
4.75	112	217	45.6	54.4	53-71	Satisfactory
2.36	47	264	55.5	44.5	42-56	Satisfactory
1.18	42	306	64.3	35.7	34-48	Satisfactory
0.6	42	348	73.1	26.9	26-38	Satisfactory
0.3	36	384	80.7	19.3	18-28	Satisfactory
0.15	27	411	86.4	13.6	12-20	Satisfactory
0.075	38	449	94.4	5.6	4-10	Satisfactory
Remarks: Satisfactory						

Transheight Consultants Pvt. Ltd. Bangalore

Client

Contractor

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11			
Test Reults of Bitumen Binder Content and Gradation for Bituminous Macadam (BM-II)			
IS 2386 (Part-1) 1963 (Reaffirmed-2011)		Date: 05-11-2019	
Lab I'd	ISO/IEC17025:2005		
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.		
Consultant	Transheight Consultants Private Limited		
Contractor	B.B Umesh (S.M.L.P Asphats)		
Customer Reference	BBMP/EE/BTP/WO/110/2019-20		
Source of Sample	Sample supplied by Agency		
Date of Reciept	5/11/2019		
Type of Mix	Bituminous Macadam (BM-II)		
Date of Test	5/11/2019		
Calculation			
	Chainage:		
	Trial 1	Trial 2	Trial 3
Wt of empty Bowl (g)	1031	1032	1030
Wt of empty Bowl + Mix before extraction (g)	1531	1532	1530
Wt of empty Bowl + Mix after extraction (g)	1514	1514	1513
Wt of filter paper before extraction (g)	3.5	3.5	3.5
Wt of filter paper after extraction (g)	5.2	5.3	5.35
Wt of fines (g)	1.7	1.8	1.85
Wt of aggrigate (g)	484.7	483.8	484.85
Wt of bitumin (g)	17	18	17
% binder contents in mix	3.51	3.72	3.51
Avg binder contents in mix (%)	3.58		
Remarks :			
PMC	Client	Contractor	

Transheight Consultants Pvt Ltd. Bangalore

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Test Reults of Bitumen Binder Content and Gradation for Bituminous Macadam (BM-II)						
					Date: 05-11-2019	
After Extraction (Trial-1)						
Total wt of the sample (gms):			484.7			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-17) (Grading-II)	Remarks
26.5	0	0	0.0	100	100	Satisfactory
19	8	8	1.7	98.3	90-100	Satisfactory
13.2	61	69	14.2	85.8	56-88	Satisfactory
4.75	282	351	72.4	27.6	16-36	Satisfactory
2.36	51	402	82.9	17.1	4-19	Satisfactory
0.3	69	471	97.2	2.8	2-10	Satisfactory
0.075	13	484	99.9	0.1	0-8	Satisfactory
Remarks: Satisfactory						
After Extraction (Trial-2)						
Total wt of the sample (gms):			483.8			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-23) (Grading-II)	Remarks
26.5	0	0	0.0	100	100	Satisfactory
19	10	10	2.1	97.9	90-100	Satisfactory
13.2	77	87	17.9	82.1	56-88	Satisfactory
4.75	302	389	80.3	19.7	16-36	Satisfactory
2.36	52	441	91.0	9.0	4-19	Satisfactory
0.3	32	473	97.6	2.4	2-10	Satisfactory
0.075	8	481	99.2	0.8	0-8	Satisfactory
Remarks: Satisfactory						
After Extraction (Trial-3)						
Total wt of the sample (gms):			484.85			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-23) (Grading-II)	Remarks
26.5	0	0	0.0	100	100	Satisfactory
19	11	11	2.3	97.7	90-100	Satisfactory
13.2	82	93	19.2	80.8	56-88	Satisfactory
4.75	310	403	83.1	16.9	16-36	Satisfactory
2.36	37	440	90.8	9.2	4-19	Satisfactory
0.3	33	473	97.6	2.4	2-10	Satisfactory
0.075	8	481	99.2	0.8	0-8	Satisfactory
Remarks: Satisfactory						
Transheight Consultants Pvt. Ltd. Bangalore RMC			Client		Contractor	

AEE (VRP) SD

www.transheight.com
transheight.consultant@gmail.com

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Name of Work : Improvements to Roads and Drains in Kuvempu Nagara, Singapura, Ramachandrapura and surrounding areas in ward no-11			
Test Reults of Bitumen Binder Content and Gradation for Bituminous Macadam (BM-II)			
IS 2386 (Part-1) 1963 (Reaffirmed-2011)		**Date: 06-11-2019**	
Lab I'd	**ISO/IEC17025:2005**		
Client	**Bruhat Bengalore Mahanagara Palike (BBMP) , Byatarayanapura, Bengaluru.**		
Consultant	**Transheight Consultants Private Limited**		
Contractor	**B.B Umesh (S.M.L.P Asphats)**		
Customer Reference	**BBMP/EE/BTP/WO/110/2019-20**		
Source of Sample	**Sample supplied by Agency**		
Date of Reciept	**6/11/2019**		
Type of Mix	**Bituminous Macadam (BM-II)**		
Date of Test	**6/11/2019**		
Calculation			
	Chainage:		
	Trial 1	**Trial 2**	**Trial 3**
Wt of empty Bowl (g)	1035	1034	1032
Wt of empty Bowl + Mix before extraction (g)	1535	1534	1532
Wt of empty Bowl + Mix after extraction (g)	1518	1516	1516
Wt of filter paper before extraction (g)	3.5	3.5	3.5
Wt of filter paper after extraction (g)	5.5	5.22	5.16
Wt of fines (g)	2	1.72	1.66
Wt of aggrigate (g)	485.00	483.72	485.66
Wt of bitumin (g)	17	18	16
% binder contents in mix	3.51	3.72	3.29
Avg binder contents in mix (%)	**3.51**		
Remarks :			

Transheight Consultants Pvt Ltd. Bangalore PMC

Client **Contractor**

AEE (VRP) SD

TRANSHEIGHT CONSULTANTS PVT LTD
#1192,'A'Block,3rdCross, 5th Main,
Sahakarnagar,Bangalore-560092
098869 13195,080236 29195

Test Reults of Bitumen Binder Content and Gradation for Bituminous Macadam (BM-II)

Date: 06-11-2019

After Extraction (Trial-1)

Total wt of the sample (gms):			485			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-17) (Grading-II)	Remarks
26.5	0	0	0.0	100	100	Satisfactory
19	10	10	2.1	97.9	90-100	Satisfactory
13.2	89	99	20.4	79.6	56-88	Satisfactory
4.75	304	403	83.1	16.9	16-36	Satisfactory
2.36	40	443	91.3	8.7	4-19	Satisfactory
0.3	32	475	97.9	2.1	2-10	Satisfactory
0.075	9	484	99.8	0.2	0-8	Satisfactory

Remarks: Satisfactory

After Extraction (Trial-2)

Total wt of the sample (gms):			483.72			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-23) (Grading-II)	Remarks
26.5	0	0	0.0	100	100	Satisfactory
19	9	9	1.9	98.1	90-100	Satisfactory
13.2	92	101	20.8	79.2	56-88	Satisfactory
4.75	306	407	83.9	16.1	16-36	Satisfactory
2.36	30	437	90.1	9.9	4-19	Satisfactory
0.3	38	475	97.9	2.1	2-10	Satisfactory
0.075	6	481	99.2	0.8	0-8	Satisfactory

Remarks: Satisfactory

After Extraction (Trial-3)

Total wt of the sample (gms):			485.66			
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 500-23) (Grading-II)	Remarks
26.5	0	0	0.0	100	100	Satisfactory
19	12	12	2.5	97.5	90-100	Satisfactory
13.2	98	110	22.7	77.3	56-88	Satisfactory
4.75	291	401	82.7	17.3	16-36	Satisfactory
2.36	36	437	90.1	9.9	4-19	Satisfactory
0.3	40	477	98.4	1.6	2-10	Satisfactory
0.075	5	482	99.4	0.6	0-8	Satisfactory

Remarks: Satisfactory

Transheight Consultants Pvt. Ltd. Bangalore

Client Contractor

AEE (VRP) SD

www.transheight.com
transheight.consultant@gmail.com